

b5  
A diagrammatic representation of apparatus for diffusive mixing by the contact of two flows in a mixing channel with allowance for parting product flows is shown in Figure 7b with relevant features indicated.

**IN THE CLAIMS**

Please cancel claims 1, 4, 5, 6 and 7 without prejudice.

Please substitute the following amended claims for corresponding claims previously submitted. A copy of the amended claims showing the requested revisions is attached.

- b6  
Sub C1
2. (Amended) A microfabricated binding assay device comprising;
- (1) an internal surface defining a microfabricated conduit,
  - (2) a diffusion region within the microfabricated conduit which defines an area which is smaller than the length of the microfabricated conduit,
  - (3) the microfabricated conduit having at least one inlet for introducing liquid into the microfabricated conduit and for introducing into the diffusion region a mixture comprising a test compound and a receptor or a test compound, a receptor and a ligand, and
  - (4) an outlet for exiting liquid from the microfabricated conduit, such that in use the ability of the test compound to prevent the binding of the ligand, if present, to the receptor, or the ability of the test compound to bind the receptor, is determined by

reference to the diffusion of the test compound, the receptor or the ligand out of the diffusion region.

B6 cond 2 3. (Amended) A device as claimed in claim 2 further comprising a detector for detecting the presence of test compound or ligand.

sub C7 B7 8. (Amended) A method for determining in a microfabricated device the ability of a test compound to either interfere with the binding of a ligand to a receptor or to bind with a receptor, which method comprises:  
(1) introducing liquid into the microfabricated conduit,  
(2) introducing a mixture comprising a test compound and a receptor or a test compound, a receptor and a ligand into a diffusion region of the microfabricated conduit, the diffusion region defines an area within the microfabricated conduit which is smaller than the length of the microfabricated conduit, and  
(3) detecting the diffusion of the test compound, or the ligand, if used, out of the diffusion region.

Please add the following new claim.

B8 sub C3 9. (New) A method as claimed in claim 8 wherein diffusion is detected either side of the diffusion region.